# Contents


**Aboulafia, J., Lacaz-Vieira, F.**
Vanadate and ouabain: a comparative study in toad skin 204

**Alhenc-Gelas, F.**, see Marchetti, J., et al. 27

**Alix, J.**, see Joffre, M., et al. 239

**Allegrini, J.**, see Marchetti, J., et al. 27

**Arnason, S. S.**, see Clauss, W., et al. 354

**Assumpção, J. A.**, see Bernardi, N., et al. 193

**Astrup, A., Bülow, J., Madsen, J.**
Interscapular brown adipose tissue blood flow in the rat. Determination with $^{133}$xenon clearance compared to the microsphere method 414

**Barnas, G., Nomoto, S., Rautenberg, W.**
Cardiovascular and blood gas responses to shivering produced by external and central cooling in the pigeon 223

**Barnas, G., Rautenberg, W.**
Respiratory responses to shivering produced by external and central cooling in the pigeon 228

**Baum, J.**, see Scarpelli, E. M., et al. 287

**Baumann, K.**, see Cojocel, C., et al. 333

**Beckh, K., Hartmann, H., Jungermann, K., Scholz, R.**
Regulation of oxygen consumption in perfused rat liver: decrease by α-sympathetic nerve stimulation and increase by the α-agonist phenylephrine 104

**Bennet, F. M., John, W. M. St.**
Anesthesia selectively reduces hypoglossal nerve activity by actions upon the brain stem 421

**Bernardi, N., Assumpção, J. A., Dacke, C. G., Davidson, N.**
Release of labelled taurine from the rat dorsal medulla and cerebellum in vivo 193

**Berne, R. M.**, see Knabb, M. T., et al. 435

**Binder, H. J.**, see Sandle, G. I., et al. 22

**Blatz, A. L.**
Asymmetric proton block of inward rectifier K channels in skeletal muscle 402

**Booth, F. W.**, see Nicholson, W. F., et al. 321

**Bornet, H.**, see Rousset, B., et al. 64

**Bostrom, S.**, see Gagelmann, M., et al. 107

**Brokl, O. H.**, see Dantzler, W. H. 262

**Brum, G., Osterrieder, W., Trautwein, W.**
β-Adrenergic increase in the calcium conductance of cardiac myocytes studied with the patch clamp 111

**Brutsaert, D. L.**, see Sys, S. U., et al. 368

**Bülow, J.**, see Astrup, A., et al. 414

**Burckhardt, B.-Ch., Cassola, A. C., Frömter, E.**
Electrophysiological analysis of bicarbonate permeation across the peritubular cell membrane of rat kidney proximal tubule. II. Exclusion of $HCO_3^-$-effects on other ion permeabilities and of coupled electroneutral $HCO_3^-$-transport 43

**Burckhardt, B.-Ch., Sato, K., Frömter, E.**
Electrophysiological analysis of bicarbonate permeation across the peritubular cell membrane of rat kidney proximal tubule. I. Basic observations 34

**Burckhardt, G.**
Sodium-dependent dicarboxylate transport in rat renal basolateral membrane vesicles 254

**Busse, R., Förstermann, U., Matsuda, H., Pohl, U.**
The role of prostaglandins in the endothelium-mediated vasodilatory response to hypoxia 77

**Butler, T. M.**, see Siegman, M. J., et al. 385

**Butler, T. M., Siegman, M. J., Mooers, S. U.**
Chemical energy usage during stimulation and stretch of mammalian smooth muscle 391

**Camerer, H.**, see Kettenmann, H., et al. 324

**Camus, J.-C.**, see Robberecht, P., et al. 1

**Capraro, V.**, see Faelli, A., et al. 427

**Caratsch, C. G., Waser, P. G.**
Effects of obidoxime chloride on native and sarin-poisoned frog neuromuscular junctions 84

**Carlisle, H. J.**, see Schmidt, I., et al. 418

**Cassola, A. C.**, see Burckhardt, B.-Ch., et al. 43

**Cecchi, G., Lombardi, V., Menchetti, G.**
Development of force-velocity relation and rise of isometric tetanic tension measure the time course of different processes 396

**Chao-yi, L., Creutzfeldt, O.**
The representation of contrast and other stimulus parameters by single neurons in area 17 of the cat 304

**Chinet, A., Clausen, T.**
Energetics of active sodium-potassium transport following stimulation with insulin, adrenaline or salbutamol in rat soleus muscle 160

**Christophe, J.**, see Robberecht, P., et al. 1

**Clausen, T.**, see Chinet, A. 160

**Clauss, W., Árnason, S. S., Munck, B. G., Skadhauge, E.**
Aldosterone-induced sodium transport in lower intestine. Effects of varying NaCl intake 354

**Cleemann, L., Gaughan, M. J.**
Measurement of intracellular $^{42}$K diffusion in frog ventricular strips 101

**Clutario, B. C.**, see Scarpelli, E. M., et al. 287

**Cohen, I.**, see Dudel, J., et al. 293

**Cojocel, C., Maita, K., Baumann, K., Hook, J. B.**
Renal processing of low molecular weight proteins 333

**Creutzfeldt, O.**, see Chao-yi, L. 304

**Curci, S., Schettino, T.**
Effect of external sodium on intracellular chloride activity in the surface cells of frog gastric mucosa. Microelectrode studies 152

**Cure, M.**, see Rousset, B., et al. 64

**Dacke, C. G.**, see Bernardi, N., et al. 193

**Dantzler, W. H., Brokl, O. H.**
Lack of effect of low [$Ca^{2+}$], $La^{3+}$, and pyrazinoate on urate transport by isolated, perfused snake renal tubules 262

**Davidson, N.**, see Bernardi, N., et al. 193

**Dawson, N. J.**, see Young, A. A. 213

**De Neef, P.**, see Robberecht, P., et al. 1

**Deetjen, P.**, see Lang, F., et al. 14

**Deetjen, P.**, see Wang, W., et al. 6

**Diaper, M. P.**, see Pegg, D. E., et al. 209

**DiSalvo, J.**, see Pfitzer, G., et al. 277

**Dubach, U. C.**, see Le Hir, M. 58

**Dudel, J., Parnas, I., Cohen, I., Franke, C.**
Excitability and depolarization-release characteristics of excitatory nerve terminals in a tail muscle of spiny lobster 293

**de Mello-Aires, M.**, see Rebouças, N. A., et al. 266

**de Rouffignac, C.**, see Elalouf, J. M., et al. 167

**Elalouf, J. M., Roinel, N., de Rouffignac, C.**
Effects of antidiuretic hormone on electrolyte reabsorption and secretion in distal tubules of rat kidney 167

**Elias, M. M.**, see Rebouças, N. A., et al. 266

**Esposito, G.**, see Faelli, A., et al. 427

**Faelli, A., Tosco, M., Orsenigo, M. N., Esposito, G., Capraro, V.**
Bicarbonate movement across basolateral membrane vesicles from rat jejunum 427

**Fernandes, D. T.**, see Rebouças, N. A., et al. 266

**Fisher, J. T.**, see Mortola, J. P., et al. 281

**Förstermann, U.**, see Busse, R., et al. 77

**Fontaine, J.**, see Robberecht, P., et al. 1

**Franke, C.**, see Dudel, J., et al. 293

**Frömter, E.**, see Burckhardt, B.-Ch., et al. 34

**Frömter, E.**, see Burckhardt, B.-Ch., et al. 43

**Gagelmann, M., Mrwa, U., Bostrom, S., Rüegg, J. C., Hartshorne, D.**
Effect of $Ca^{2+}$-independent myosin light chain kinase on different skinned smooth muscle fibers 107

**Gallacher, D. V., Maruyama, Y., Petersen, O. H.**
Patch-clamp study of rubidium and potassium conductances in single cation channels from mammalian exocrine acini 361

**Gargouïl, Y. M.**, see Joffre, M., et al. 239

**Gargouïl, Y. M.**, see Joffre, M., et al. 246

**Gaughan, M. J.**, see Cleemann, L. 101

**Gebler, B.**, see Greger, R., et al. 52

**Geppert, V.**, see Wolpers, H. G., et al. 217

**Giniatullin, R. A.**, see Magazanik, L. G., et al. 185

**Gögelein, H., Greger, R.**
Single channel recordings from basolateral and apical membranes of renal proximal tubules 424

**Gögelein, H., Koepsell, H.**
Channels in planar bilayers made from commercially available lipids 433

**Gottschlich, K.-W., Werner, J., Schingnitz, G.**
Thermoafferent signal processing in rats: an electrophysiological analysis of midbrain influences on thermoresponsive neurons in the ventrobasal thalamus 91

**Greger, R.**, see Gögelein, H. 424

**Greger, R., Weidtke, C., Schlatter, E., Wittner, M., Gebler, B.**
Potassium activity in cells of isolated perfused cortical thick ascending limbs of rabbit kidney 52

**Hakim, T.**, see Rohlicek, C. V., et al. 380

**Hamar, J., Hutiray, G.**
In vivo determination of transport and metabolism of deoxyglucose in intestinal tissues 233

**Hansell, P., Sadowski, J., Sjöquist, M., Ulfendahl, H. R.**
A method for in situ measurement of ionic concentration in picoliter samples of renal tubular fluid 430

**Hartmann, H.**, see Beckh, K., et al. 104

**Hartshorne, D.**, see Gagelmann, M., et al. 107

**Hayes, A. R.**, see Pegg, D. E., et al. 209

**Hayslett, J. P.**, see Sandle, G. I., et al. 22

**Hellige, G.**, see Wolpers, H. G., et al. 217

**Hellstrand, P., Jorup, C., Lydrup, M.-L.**
$O_2$ Consumption, aerobic glycolysis and tissue phosphagen content during activation of the $Na^+/K^+$ pump in rat portal vein 119

**Herrmann, G.**, see Lutz, J. 174

**Hescheler, J.**, see Trube, G. 178

**Hoeft, A.**, see Wolpers, H. G., et al. 217

**Hofmann, F.**, see Pfitzer, G., et al. 277

**Hook, J. B.**, see Cojocel, C., et al. 333

**Housmans, P. R.**, see Sys, S. U., et al. 368

**Hütter, J. F.**, see Piper, H. M., et al. 71

**Huguenin, F.**
The short-term-influence of catecholamines on acid-base balance of rat soleus muscle in vitro 272

**Huijing, P. A.**, see Woittiez, R. D., et al. 374

**Hus-Citharel, A.**, see Le Bouffant, F., et al. 346

**Hutiray, G.**, see Hamar, J. 233

**Illert, M., Wiedemann, E.**
Pyramidal actions in identified radial motornuclei of the cat 132

**Imai, Y.**, see Nakagaki, I., et al. 340

**Imbert-Teboul, M.**, see Marchetti, J., et al. 27

**Jänig, W., Krauspe, R., Wiedersatz, G.**
Activation of postganglionic neurones via non-nicotinic synaptic mechanisms by stimulation of thin preganglionic axons 318

**Janczewski, A.**, see Lewartowski, B., et al. 198

**Joffre, M., Mollard, P., Régondaud, P., Alix, J., Poindessault, J. P., Malassiné, A., Gargouïl, Y. M.**
Electrophysiological study of single Leydig cells freshly isolated from rat testis. I. Technical approach and recordings of the membrane potential in standard solution 239

**Joffre, M., Mollard, P., Régondaud, P., Gargouïl, Y. M.**
Electrophysiological study of single Leydig cells freshly isolated from rat testis. II. Effects of ionic replacements, inhibitors and human chorionic gonadotropin on a calcium activated potassium permeability 246

**John, W. M. St.**, see Bennet, F. M. 421

**Jordan, D.**, see Rousset, B., et al. 64

**Jorup, C.**, see Hellstrand, P., et al. 119

**Jungermann, K.**, see Beckh, K., et al. 104

**Kaul, R.**, see Schmidt, I., et al. 418

**Kervran, A.**, see Rousset, B., et al. 64

**Kettenmann, H., Sonnhof, U., Camerer, H., Kuhlmann, S., Orkand, R. K., Schachner, M.**
Electrical properties of oligodendrocytes in culture 324

**Knabb, M. T., Rubio, R., Berne, R. M.**
Calcium-dependent atrial slow action potentials generated with phosphatidic acid or phospholipase *D* 435

**Koepsell, H.**, see Gögelein, H. 433

**Korb, H.**, see Wolpers, H. G., et al. 217

**Kordaš, M., Zorec, R.**
The voltage and temperature dependence of the end-plate current in frog skeletal muscle 408

**Krauspe, R.**, see Jänig, W., et al. 318

**Kuhlmann, S.**, see Kettenmann, H., et al. 324

**Lacaz-Vieira, F.**, see Aboulafia, J., et al. 204

**Lang, F.**, see Oberleithner, H. 315

**Lang, F.**, see Wang, W., et al. 6

**Lang, F., Messner, G., Wang, W., Paulmichl, M., Oberleithner, H., Deetjen, P.**
The influence of intracellular sodium activity on the transport of glucose in proximal tubule of frog kidney 14

**Lazdunski, M.**, see Vijverberg, H. P. M., et al. 297

**Le Bouffant, F., Hus-Citharel, A., Morel, F.**
Metabolic $CO_2$ production by isolated single pieces of rat distal nephron segments 346

**Le Hir, M., Dubach, U. C.**
Sodium gradient-energized concentrative transport of adenosine in renal brush border vesicles 58

**Lewartowski, B., Pytkowski, B., Janczewski, A.**
Calcium fraction correlating with contractile force of ventricular muscle of guinea-pig heart 198

**Lombardi, V.**, see Cecchi, G., et al. 396

**Lutz, J., Herrmann, G.**
Perfluorochemicals as a treatment of decompression sickness in rats 174

**Lydrup, M.-L.**, see Hellstrand, P., et al. 119

**Madsen, J.**, see Astrup, A., et al. 414

**Magazanik, L. G., Nikolsky, E. E., Giniatullin, R. A.**
End-plate currents evoked by paired stimuli in frog muscle fibres 185

**Maita, K.**, see Cojocel, C., et al. 333

**Malassiné, A.**, see Joffre, M., et al. 239

**Malnic, G.**, see Rebouças, N. A., et al. 266

**Marchetti, J., Imbert-Teboul, M., Alhenc-Gelas, F., Allegrini, J., Menard, J., Morel, F.**
Kallikrein along the rabbit microdissected nephron: A micromethod for its measurement. Effect of adrenalectomy and DOCA treatment 27

**Maruyama, Y.**, see Gallacher, D. V., et al. 361

**Matsuda, H.**, see Busse, R., et al. 77

**Mautone, A. J.**, see Scarpelli, E. M., et al. 287

**Menard, J.**, see Marchetti, J., et al. 27

**Menchetti, G.**, see Cecchi, G., et al. 396

**Messner, G.**, see Lang, F., et al. 14

**Messner, G.**, see Wang, W., et al. 6

**Michalek, A.**, see Siegman, M. J., et al. 385

**Mollard, P.**, see Joffre, M., et al. 239

**Mollard, P.**, see Joffre, M., et al. 246

**Mooers, S. U.**, see Butler, T. M., et al. 391

**Mooers, S. U.**, see Siegman, M. J., et al. 385

**Morel, F.**, see Le Bouffant, F., et al. 346

**Morel, F.**, see Marchetti, J., et al. 27

**Mornex, R.**, see Rousset, B., et al. 64

**Mortola, J. P., Fisher, J. T., Sant'Ambrogio, G.**
Vagal control of the breathing pattern and respiratory mechanics in the adult and newborn rabbit 281

**Mrwa, U.**, see Gagelmann, M., et al. 107

**Munck, B. G.**, see Clauss, W., et al. 354

**Nakagaki, I., Sasaki, S., Shiguma, M., Imai, Y.**
Distribution of elements in the pancreatic exocrine cells determined by electron probe X-ray microanalysis 340

**Neumcke, B., Stämpfli, R.**
Heterogeneity of external surface charges near sodium channels in the nodal membrane of frog nerve 125

**Nicholson, W. F., Watson, P. A., Booth, F. W.**
Levels of blood-bourne factors and cytosol glucocorticoid receptors during the initiation of muscle atrophy in rodent hindlimbs 321

**Nikolsky, E. E.**, see Magazanik, L. G., et al. 185

**Nomoto, S.**, see Barnas, G., et al. 223

**Oberleithner, H.**, see Lang, F., et al. 14

**Oberleithner, H.**, see Wang, W., et al. 6

**Oberleithner, H., Lang, F.**
Cytotoxic effect of choline, abolished by furosemide, in the diluting segment of frog kidney 315

**Orkand, R. K.**, see Kettenmann, H., et al. 324

**Orsenigo, M. N.**, see Faelli, A., et al. 427

**Osterrieder, W.**, see Brum, G., et al. 111

**Parnas, I.**, see Dudel, J., et al. 293

**Paulmichl, M.**, see Lang, F., et al. 14

**Pauron, D.**, see Vijverberg, H. P. M., et al. 297

**Pegg, D. E., Hayes, A. R., Diaper, M. P.**
The measurement of low flow rates (0.1–30 ml/min) of conducting fluids 209

**Petersen, O. H.**, see Gallacher, D. V., et al. 361

**Pfitzer, G., Hofmann, F., DiSalvo, J., Rüegg, J. C.**
cGMP and cAMP inhibit tension development in skinned coronary arteries 277

**Piper, H. M., Schwartz, P., Spahr, R., Hütter, J. F., Spieckermann, P. G.**
Absence of reoxygenation damage in isolated heart cells after anoxic injury 71

**Pohl, U.**, see Busse, R., et al. 77

**Poindessault, J. P.**, see Joffre, M., et al. 239

**Polosa, C.**, see Rohlicek, C. V., et al. 380

**Popovtzer, M. M.**, see Wald, H. 97

**Pytkowski, B.**, see Lewartowski, B., et al. 198

**Rautenberg, W.**, see Barnas, G., et al. 223

**Rautenberg, W.**, see Barnas, G. 228

**Rebouças, N. A., Fernandes, D. T., Elias, M. M., de Mello-Aires, M., Malnic, G.**
Proximal tubular $HCO_3^-$, $H^+$ and fluid transport during maleate-induced acidification defect 266

**Régondaud, P.**, see Joffre, M., et al. 239

**Régondaud, P.**, see Joffre, M., et al. 246

**Robberecht, P., De Neef, P., Waelbroeck, M., Camus, J.-C., Fontaine, J., Christophe, J.**
Secretin-induced changes in rate, contractility and adenylate cyclase activity in rat heart atria 1

**Rohlicek, C. V., Hakim, T., Polosa, C.**
Neural effects of systemic hypoxia on hindlimb vascular resistance in sinoaortic-denervated cats 380

**Roinel, N.**, see Elalouf, J. M., et al. 167

**Rousset, B., Cure, M., Jordan, D., Kervran, A., Bornet, H., Mornex, R.**
Metabolic alterations induced by chronic heat exposure in the rat: the involvement of thyroid function 64

**Rozendal, R. H.**, see Woittiez, R. D., et al. 374

**Rubio, R.**, see Knabb, M. T., et al. 435

**Rüegg, J. C.**, see Gagelmann, M., et al. 107

**Rüegg, J. C.**, see Pfitzer, G., et al. 277

**Sadowski, J.**, see Hansell, P., et al. 430

**Sandle, G. I., Hayslett, J. P., Binder, H. J.**
Effect of chronic hyperaldosteronism on the electrophysiology of rat distal colon 22

**Sant'Ambrogio, G.**, see Mortola, J. P., et al. 281

**Sasaki, S.**, see Nakagaki, I., et al. 340

**Sato, K.**, see Burckhardt, B.-Ch., et al. 34

**Scarpelli, E. M., Clutario, B. C., Mautone, A. J., Baum, J.**
Intrasaccular bubbles of near-zero surface tension stabilize neonatal lungs 287

**Schachner, M.**, see Kettenmann, H., et al. 324

**Schafer, J. A., Watkins, M. L.**
Transport of L-cystine in isolated perfused proximal straigth tubules 143

**Schettino, T.**, see Curci, S. 152

**Schingnitz, G.**, see Gottschlich, K.-W., et al. 91

**Schlatter, E.**, see Greger, R., et al. 52

**Schmidt, I., Kaul, R., Carlisle, H. J.**
Body temperature of huddling newborn Zucker rats 418

**Scholz, R.**, see Beckh, K., et al. 104

**Schräder, R.**, see Wolpers, H. G., et al. 217

**Schwartz, P.**, see Piper, H. M., et al. 71

**Shiguma, M.**, see Nakagaki, I., et al. 340

**Siegman, M. J., Butler, T. M., Mooers, S. U., Michalek, A.**
$Ca^{2+}$ can affect $V_{max}$ without changes in myosin light chain phosphorylation in smooth muscle 385

**Siegman, M. J.**, see Butler, T. M., et al. 391

**Sjöquist, M.**, see Hansell, P., et al. 430

**Skadhauge, E.**, see Clauss, W., et al. 354

**Sonnhof, U.**, see Kettenmann, H., et al. 324

**Spahr, R.**, see Piper, H. M., et al. 71

**Spieckermann, P. G.**, see Piper, H. M., et al. 71

**Stämpfli, R.**, see Neumcke, B. 125

**Sys, S. U., Housmans, P. R., Van Ocken, E. R., Brutsaert, D. L.**
Mechanisms of hypoxia-induced decrease of load dependence of relaxation in cat papillary muscle 368

**Tosco, M.**, see Faelli, A., et al. 427

**Trautwein, W.**, see Brum, G., et al. 111

**Trube, G., Hescheler, J.**
Inward-rectifying channels in isolated patches of the heart cell membrane: ATP-dependence and comparison with cell-attached patches 178

**Ulfendahl, H. R.**, see Hansell, P., et al. 430

**Van Ocken, E. R.**, see Sys, S. U., et al. 368

**Vijverberg, H. P. M., Pauron, D., Lazdunski, M.**
The effect of *Tityus serrulatus* scorpion toxin γ on Na channels in neuroblastoma cells 297